

ABSTRACT

The present invention relates to a objective measurement of fabric pillings, to a measurement apparatus which includes stereovision technique using CCD cameras, captures the 3-dimensional contours of fabric pilling and defines the degree of pilling occurrences.

This invention is composed of ; a step to scan the surface of a pilling-containing fabric specimen which is laid on the table and translated in the right angle of the projector laser beam ; a step to reconstruct the scanned fabric surface data in to a 3D image ; a step to convert the 3D image into a binary image using height-threshold method and number, area, density of pillings acquired from standard pictures ; a step to calculate the x, y coordinates and height values of each and every area of the specimen ; a step to regress the relationship between the height values of the pilling fabric specimen and the actual height values.

Thus the measurement of fabric surface pillings using stereovision method which is composed of slit beam laser projector and a couple of CCD cameras can be a fast and accurate evaluation method regardless of the fabric's color and pattern shape.